

0590  
0102  
#8

OIEP

## RAW SEQUENCE LISTING

DATE: 01/04/2002

PATENT APPLICATION: US/09/770,689A

TIME: 14:44:57

Input Set : A:\Seqlist.txt

Output Set: N:\CRF3\01042002\I770689A.raw

ENTERED

4 <110> APPLICANT: YAN, Chunhua et al.  
 6 <120> TITLE OF INVENTION: ISOLATED HUMAN RAS-LIKE PROTEINS,  
 7 NUCLEIC ACID MOLECULES ENCODING THESE HUMAN RAS-LIKE  
 8 PROTEINS, AND USES THEREOF  
 10 <130> FILE REFERENCE: CL001079  
 12 <140> CURRENT APPLICATION NUMBER: 09/770,689A  
 13 <141> CURRENT FILING DATE: 2001-01-29  
 15 <160> NUMBER OF SEQ ID NOS: 5  
 17 <170> SOFTWARE: FastSEQ for Windows Version 4.0  
 19 <210> SEQ ID NO: 1  
 20 <211> LENGTH: 3248  
 21 <212> TYPE: DNA  
 22 <213> ORGANISM: HUMAN  
 24 <400> SEQUENCE: 1

25 ccgcgcgcgc gtttggggcc ggwagcgatg tagtagctgc caggctgtcc cccgcccctgc 60  
 26 ccggcccgag ccccgcgggc cgccgcgcgc accgcccga tgaagaagca gttcaaccgc 120  
 27 atgaagcagc tggctaacca gaccgtgggc agagctgaga aaacagaagt ccttagtgaa 180  
 28 gatctattac agattgagag acgcctggac acggtgcggt caatatgcc aatttcccat 240  
 29 aagcgcttgg tggcatgttt ccagggccag catggcaccg atgccgagag gagacacaaa 300  
 30 aaactgcctc tgacagctct tgcacaaaat atgcaagaag catcgactca gctggaagac 360  
 31 tctctcctgg ggaagatgct ggagacgtgt ggagatgctg agaatcagct ggctctcgag 420  
 32 ctctcccagc acgaagtctt tgttgagaag gagatcgctg accctctgta cggcatagct 480  
 33 gaggtggaga ttcccaacat ccagaagcag aggaagcagc ttgcaagatt ggtgttagac 540  
 34 tgggattcag tcagagccag gtggaaccaa gctcacaaa cctcaggaac caactttcag 600  
 35 gggcttccat caaaaataga tactctaaag gaagagatgg atgaagctgg aaataaagta 660  
 36 gaacagtgcag aggatcaact tgcagcagac atgtacaact ttatggccaa agaaggggag 720  
 37 tatggcaaat tctttgttac gttattagaa gcccaagcag attaccatag aaaagcatta 780  
 38 gcagctcttag aaaagaccct ccccgaatg cgagcccac aagataagtg ggcggaaaaa 840  
 39 ccagcctttg ggactccctt agcagaacac ctgaagagga gcgggcgcga gattgcgctg 900  
 40 cccattgaag cctgtgtcat gctgcttctg gagacaggca tgaaggagga gggccttttc 960  
 41 cgaattgggg ctggggcctc caagttaaag aagctgaaag ctgctttgga ctgttctact 1020  
 42 tctcacctgg atgagttcta ttcagacccc catgctgtag caggtgcttt aaaatcctat 1080  
 43 ttacgggaat tgctgaacc tttgatgact tttaatctgt atgaagaatg gacacaagtt 1140  
 44 gcaagtgtgc aggatcaaga caaaaaactt caagacttgt ggagaacatg tcagaagtgt 1200  
 45 ccaccacaaa attttgttaa ctttagatat ttgatcaagt tccttgcaaa gcttgctcag 1260  
 46 accagcgatg tgaataaaat gactcccagc aacattgcga ttgtgttagg ccctaacttg 1320  
 47 ttatgggcca gaaatgaagg gacattgct gaaatggcag cagccacatc cgtccatgtg 1380  
 48 gttgcagtga ttgaacccat cattcagcat gccgactggt tcttccctga agaggtggaa 1440  
 49 tttaatgtat cagaagcatt tgtacctctc accaccccga gttctaata ctcattccac 1500  
 50 actggaaaacg actctgactc ggggaccctg gagagggaag ggctgctag catggcggtg 1560  
 51 atggaaggag acttggtgaa gaaggaaagt cctcccaaac cgaaggacc tgatatcgca 1620  
 52 gctgtgccag caccagggag aaacaacagt cagatagcat ctggccaaa tcagcccagc 1680  
 53 gcagctgctg gctcccacca gctctccatg ggccaacctc acaatgctgc agggcccagc 1740  
 54 ccgcatacac tgcgcgagc tgttaaaaaa cccgctccag cacccccga accgggcaac 1800  
 55 ccacctctg gccaccccgg gggccagagt tcttcaggaa catctcagca tccaccagc 1860  
 56 ctgtcaccaa agccacccac ccgaagcccc tctctccca cccagcacac gggccagcct 1920  
 57 ccaggccagc cctccgcccc ctcccagctc tcagcacccc ggaggtactc cagcagcttg 1980

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/770,689A

DATE: 01/04/2002

TIME: 14:44:57

Input Set : A:\Seqlist.txt

Output Set: N:\CRF3\01042002\I770689A.raw

```

58 tctccaatcc aagctcccaa tcaccaccg cgcagcccc ctacgcaggc cagccactg 2040
59 atgcacacca aaccaatag ccagggccct cccaaccca tggcattgcc cagtgcagcat 2100
60 ggacttgagc agccatctca caccctccc cagactccaa cgccccccag tactccgccc 2160
61 ctaggaaaac agaaccacag tctgccagct cctcagaccc tggcaggggg taacctgaa 2220
62 actgcacagc cacatgctgg aaccttaccg agaccgagac cagtaccaa gccaaggaac 2280
63 cggcccagcg tgccccacc cccccaacct cctggtgtcc actcagctgg ggacagcagc 2340
64 ctcaccaaca cagaccaac agcttccaag atagtaacag actccaattc cagggtttca 2400
65 gaaccgcacg gcagcatctt tcctgaaatg cactcagact cagccagcaa agacgtgcct 2460
66 ggccgcaccc tgctggatat agacaatgat accgagagca ctgccctgtg aagaaagccc 2520
67 tttcccagcc ctccaccact tccaccctgg cgagtggagc aggggcaggc gaacctctt 2580
68 ctttgacagc cgaacagtga aaagctttca gtggaggaca aaggagggcc tcaactgtgcg 2640
69 ggacctggcc ttctgcacgg cccaaggaga acctggaggc caccactaaa gctgaatgac 2700
70 ctgtgtcttg aagaagttgg ctttctttac atgggaagga aatcatgcca aaaaaatcca 2760
71 aaacaaagaa gtacctggag tggagagagt attcctgctg aaacgcgcac aggaagcttt 2820
72 tgtccctgct gttaatgcgg gcagcaccta cagcaacttg gaatgagtaa gaagcagtcg 2880
73 gttaaactatc tatttaataa aatgcgctca ttatgcaagt cgccactct ctgctacctg 2940
74 gacgttcatt cttatgtatt aggaggagg ctgcgctcct tcagacttgc tgcagaatca 3000
75 ttttgtatca tgtatggtct gtgtctcccc agtccctca gaaccatgcc catggatggt 3060
76 gactgctggc tctgtcacct catcaaactg gatgtgaccc atgccgcctc gttggattgt 3120
77 cggaatgtag acagaaatgt actgttcttt ttttttttt taaacaatgt aattgctact 3180
78 tgataaggac cgaacattat tctagtttca tgtttaattt gaattaaata tattctgtgg 3240
79 tttatatg
81 <210> SEQ ID NO: 2
82 <211> LENGTH: 803
83 <212> TYPE: PRT
84 <213> ORGANISM: HUMAN
86 <400> SEQUENCE: 2
87 Met Lys Lys Gln Phe Asn Arg Met Lys Gln Leu Ala Asn Gln Thr Val
88 1 5 10 15
89 Gly Arg Ala Glu Lys Thr Glu Val Leu Ser Glu Asp Leu Leu Gln Ile
90 20 25 30
91 Glu Arg Arg Leu Asp Thr Val Arg Ser Ile Cys His His Ser His Lys
92 35 40 45
93 Arg Leu Val Ala Cys Phe Gln Gly Gln His Gly Thr Asp Ala Glu Arg
94 50 55 60
95 Arg His Lys Lys Leu Pro Leu Thr Ala Leu Ala Gln Asn Met Gln Glu
96 65 70 75 80
97 Ala Ser Thr Gln Leu Glu Asp Ser Leu Leu Gly Lys Met Leu Glu Thr
98 85 90 95
99 Cys Gly Asp Ala Glu Asn Gln Leu Ala Leu Glu Leu Ser Gln His Glu
100 100 105 110
101 Val Phe Val Glu Lys Glu Ile Val Asp Pro Leu Tyr Gly Ile Ala Glu
102 115 120 125
103 Val Glu Ile Pro Asn Ile Gln Lys Gln Arg Lys Gln Leu Ala Arg Leu
104 130 135 140
105 Val Leu Asp Trp Asp Ser Val Arg Ala Arg Trp Asn Gln Ala His Lys
106 145 150 155 160
107 Ser Ser Gly Thr Asn Phe Gln Gly Leu Pro Ser Lys Ile Asp Thr Leu
108 165 170 175

```

RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/09/770,689A

DATE: 01/04/2002  
 TIME: 14:44:57

Input Set : A:\Seqlist.txt  
 Output Set: N:\CRF3\01042002\I770689A.raw

```

109 Lys Glu Glu Met Asp Glu Ala Gly Asn Lys Val Glu Gln Cys Lys Asp
110          180          185          190
111 Gln Leu Ala Ala Asp Met Tyr Asn Phe Met Ala Lys Glu Gly Glu Tyr
112          195          200          205
113 Gly Lys Phe Phe Val Thr Leu Leu Glu Ala Gln Ala Asp Tyr His Arg
114          210          215          220
115 Lys Ala Leu Ala Val Leu Glu Lys Thr Leu Pro Glu Met Arg Ala His
116 225          230          235          240
117 Gln Asp Lys Trp Ala Glu Lys Pro Ala Phe Gly Thr Pro Leu Ala Glu
118          245          250          255
119 His Leu Lys Arg Ser Gly Arg Glu Ile Ala Leu Pro Ile Glu Ala Cys
120          260          265          270
121 Val Met Leu Leu Leu Glu Thr Gly Met Lys Glu Glu Gly Leu Phe Arg
122          275          280          285
123 Ile Gly Ala Gly Ala Ser Lys Leu Lys Lys Leu Lys Ala Ala Leu Asp
124          290          295          300
125 Cys Ser Thr Ser His Leu Asp Glu Phe Tyr Ser Asp Pro His Ala Val
126 305          310          315          320
127 Ala Gly Ala Leu Lys Ser Tyr Leu Arg Glu Leu Pro Glu Pro Leu Met
128          325          330          335
129 Thr Phe Asn Leu Tyr Glu Glu Trp Thr Gln Val Ala Ser Val Gln Asp
130          340          345          350
131 Gln Asp Lys Lys Leu Gln Asp Leu Trp Arg Thr Cys Gln Lys Leu Pro
132          355          360          365
133 Pro Gln Asn Phe Val Asn Phe Arg Tyr Leu Ile Lys Phe Leu Ala Lys
134          370          375          380
135 Leu Ala Gln Thr Ser Asp Val Asn Lys Met Thr Pro Ser Asn Ile Ala
136 385          390          395          400
137 Ile Val Leu Gly Pro Asn Leu Leu Trp Ala Arg Asn Glu Gly Thr Leu
138          405          410          415
139 Ala Glu Met Ala Ala Ala Thr Ser Val His Val Val Ala Val Ile Glu
140          420          425          430
141 Pro Ile Ile Gln His Ala Asp Trp Phe Phe Pro Glu Glu Val Glu Phe
142          435          440          445
143 Asn Val Ser Glu Ala Phe Val Pro Leu Thr Thr Pro Ser Ser Asn His
144          450          455          460
145 Ser Phe His Thr Gly Asn Asp Ser Asp Ser Gly Thr Leu Glu Arg Lys
146 465          470          475          480
147 Arg Pro Ala Ser Met Ala Val Met Glu Gly Asp Leu Val Lys Lys Glu
148          485          490          495
149 Ser Pro Pro Lys Pro Lys Asp Pro Val Ser Ala Ala Val Pro Ala Pro
150          500          505          510
151 Gly Arg Asn Asn Ser Gln Ile Ala Ser Gly Gln Asn Gln Pro Gln Ala
152          515          520          525
153 Ala Ala Gly Ser His Gln Leu Ser Met Gly Gln Pro His Asn Ala Ala
154          530          535          540
155 Gly Pro Ser Pro His Thr Leu Arg Arg Ala Val Lys Lys Pro Ala Pro
156 545          550          555          560
157 Ala Pro Pro Lys Pro Gly Asn Pro Pro Pro Gly His Pro Gly Gly Gln

```

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/770,689A

DATE: 01/04/2002  
TIME: 14:44:57

Input Set: A:\Seqlist.txt  
Output Set: N:\CRF3\01042002\I770689A.raw

```

158                               565                               570                               575
159 Ser Ser Ser Gly Thr Ser Gln His Pro Pro Ser Leu Ser Pro Lys Pro
160                               580                               585                               590
161 Pro Thr Arg Ser Pro Ser Pro Pro Thr Gln His Thr Gly Gln Pro Pro
162                               595                               600                               605
163 Gly Gln Pro Ser Ala Pro Ser Gln Leu Ser Ala Pro Arg Arg Tyr Ser
164                               610                               615                               620
165 Ser Ser Leu Ser Pro Ile Gln Ala Pro Asn His Pro Pro Pro Gln Pro
166 625                               630                               635                               640
167 Pro Thr Gln Ala Thr Pro Leu Met His Thr Lys Pro Asn Ser Gln Gly
168                               645                               650                               655
169 Pro Pro Asn Pro Met Ala Leu Pro Ser Glu His Gly Leu Glu Gln Pro
170                               660                               665                               670
171 Ser His Thr Pro Pro Gln Thr Pro Thr Pro Pro Ser Thr Pro Pro Leu
172                               675                               680                               685
173 Gly Lys Gln Asn Pro Ser Leu Pro Ala Pro Gln Thr Leu Ala Gly Gly
174                               690                               695                               700
175 Asn Pro Glu Thr Ala Gln Pro His Ala Gly Thr Leu Pro Arg Pro Arg
176 705                               710                               715                               720
177 Pro Val Pro Lys Pro Arg Asn Arg Pro Ser Val Pro Pro Pro Pro Gln
178                               725                               730                               735
179 Pro Pro Gly Val His Ser Ala Gly Asp Ser Ser Leu Thr Asn Thr Ala
180                               740                               745                               750
181 Pro Thr Ala Ser Lys Ile Val Thr Asp Ser Asn Ser Arg Val Ser Glu
182                               755                               760                               765
183 Pro His Arg Ser Ile Phe Pro Glu Met His Ser Asp Ser Ala Ser Lys
184                               770                               775                               780
185 Asp Val Pro Gly Arg Ile Leu Leu Asp Ile Asp Asn Asp Thr Glu Ser
186 785                               790                               795                               800
187 Thr Ala Leu
191 <210> SEQ ID NO: 3
192 <211> LENGTH: 98865
193 <212> TYPE: DNA
194 <213> ORGANISM: HUMAN
196 <400> SEQUENCE: 3
197 ctcgtaggctg agtttaatta cacactcttg ctctagctgt aaggcagagc tctccagggtt 60
198 agcttcagtg gacaatcttt tcatggtttt ctccagagttg tttcttccaa tagcctcttt 120
199 tcagctaggg gtctcactct gtcaccaga caagagtga atggtgtgat aatagctcac 180
200 tgcagcctca aattcctggg ctcaaagtat cctgttgctt cagcctttca actagttggg 240
201 agtacagggtg catgccactg cttctggcct tttttttttt tttaaatttt tcatagagat 300
202 gaggttttag tatgttgtcc aggtagttct catactcttg agctcaagt atcttcccat 360
203 cttgacctcc caaagtgcta ggattacagg tgtgagccac tgcacctggc cccagaagat 420
204 aattttttat ttgtctttta ctctatgttc aaattcttca attttttggt agactctact 480
205 ttttcaattt gtagagcttg catgaatagt gttttccttc tcttgaagtt tagagagatc 540
206 atgtactgta attcctgagc caccttgctg taacaaattt tccagttctt caatcttttc 600
207 ttcctaattg cttagatttt cttgatgctt acaacttatt tccctcaatt tctgttgatg 660
208 aacattctgt aatactgata attcaagctg atggtoatca gtatcctgac ttcttttttg 720
209 tttgagctcc ttgatgatat taatatttgg tgtttgtagt ttgtagattt cattttcatc 780
210 aaaactagtt gttcctccta ttttataagt ctgagcaata catttccaat ggccaactgg 840

```

RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/09/770,689A

DATE: 01/04/2002  
 TIME: 14:44:57

Input Set : A:\Seqlist.txt  
 Output Set: N:\CRF3\01042002\I770689A.raw

```

211 agactcaagt tttagaactt cattggacta tctgtttatt tcttgttatg atgaaattat 900
212 gtcataaaaa cccatgtaag cgtcgtggaa cactgaagca tgatgggtac cacatggaat 960
213 ggaggggatg cagtgtggat gggaacctcc ggccttccct gaatgtgctg actccagggc 1020
214 tggctgccgg tcttgcaacc gatcctgtag tgcctgcttt cttgttttag gaaggctcat 1080
215 ttctacctct ttctgttgta attgatgtcg ataactttta gtttgctgcc ctatctgaag 1140
216 ctctgatgct tcttaggtct ctcttaggtc actaaaaaga tcttgaagtc cctcattctt 1200
217 tgatattaag aattccaaac tggcatcagt ctccctttatc ccatagttag ggagctcttt 1260
218 cctttttcta tgacatttag gagcacattt gagatgtggc tgatgaaaga agccacattg 1320
219 ctgcccaccc aatgcaaaga aggggcttac ctggagccaa ggccaccaa ccaggaagac 1380
220 atgagtgtgt gagcacgtgt gttaaggaaa acacacattg actttaattt tttttttttt 1440
221 tttttttttt tcgagacagg gtctctcact ctgttgccca ggctggagtg cagtggcgcc 1500
222 atctcggtct actgcaacct ctgcctttcg ggtaaaagcc gttctcctgc ttcagcctcc 1560
223 tgagtagctg ggattacagg cgtccaccac cagccccagc taaatttgta ttgttagtag 1620
224 agacaggatt tcaccgtgtt ggccaggctg ctctogaact cccgagctca agtgatctgc 1680
225 cccctcgccc tcccaaagtg ctgagattac aacgttgaac cactgcgccc tgctagaaac 1740
226 agcttttcat acgttgaat aaacgagagg gtgaccgggc agcgttgagg tcggggaggc 1800
227 caggcgagg aggctaggg tcttctcgcc cggggccttc tagctcttcg cccgtgtcag 1860
228 gtaaggcact gttagcctcg gctcggttcg actcggtctt actcggtctc agctcggtct 1920
229 ggccagacct agaggcgagg cggcggtgc cactggaagt gacgaggcga gggcggggcc 1980
230 gccggcccg ggagccaccg ccgcccgcgc gtttgggccc ggaagcgatg tagtagctgc 2040
231 caggctgtcc ccgcccgtgc ccggcccag ccccgcgggc cgccgcgcgc accgcgcga 2100
232 tgaagaagca gttcaaccgc atgaagcagc tggctaacca gaccgtgggc aggcagtgcc 2160
233 gccgggcagc acgggggtcg caccggggct gggggcgagg ggccgagggc gcggggggcg 2220
234 gacggctcct ccgcggtccg gcggctctga gctgggcccgc agcccctgcc cgagaccagc 2280
235 ggggcacggg cccgggggct gcgcgcgct gaggcccag cgccgcgctc caggcgggcc 2340
236 gcctgtctct cagcgccgccc gggcccccga gacctgcagg ggagggcgcc cgccctctcc 2400
237 gccacaccgc ggggtccct gccattgtc cctgcccgg gagcatcgcc ctcggggagt 2460
238 agaccgggtc cttctcctcc cttcccggg gccagaccag ctgggatcgc tgccctgggc 2520
239 tcaacaacgg tgacttctgt ccctaacgct gtgcccagcg ctgtgctgtg gggggcgga 2580
240 gtcccaggct ttcccgggtc tcccgtgtt tgcgagtcc tctcctgtaa gtgcatggcg 2640
241 gcaagaaatg gctagaggga catgaaagcc agccggattt gctcagttag ttcagaacgc 2700
242 cctttgaggg aattcgagg tgggtgctgc tcaaaaccag ggctcctagg aactggactg 2760
243 ctgctgccag ttcttgacat ttagaaatta ggaattggcg gaaaaggatt atggagacgc 2820
244 cttgcgccc aaataaaaagt ctcaccttag gtttggaac aaatgcttct ttatcttct 2880
245 ttgctacggt tgaagtgtt aacaagaaac gttattgatt attaaatggc aggctagacc 2940
246 agagttggta gatcagggtg tcagaacaag aaatgatttg tggtttttga gagtttctgg 3000
247 aggtgactgt catgtgctgt attatctggg gctaataatt caaggctctt cagggcagct 3060
248 ggctgtactg taccgattta gtgtttattc agcaaagaga tacgaaagta tgaatttctc 3120
249 acagctcttc ttttgatttt ctgtttttta cagttaaggg gagtttggtt tggctgaagc 3180
250 acgtgggaca cttctttttt ttgagtgtat gaaaataact ttacttctc tcgagttttc 3240
251 taaatttgct ttttactgtt tcatttctc catctttttg cttagtctcc cttgtttaat 3300
252 tttttcgatt cctaccgta ttattgtggt gagaattaac tcttattttc agggttaatc 3360
253 gctgccccta aagcccagac aaacctactt ttctgttatt tgcaggaaaa ttaaagaaat 3420
254 aatgctgaga ggaaggtaga cgtgtggtta tggcggtga tgtttcaagg aacagtttac 3480
255 aagcacatga taatttcttg tgagtttctg acccttggtt gtgttctgag caacgtgcat 3540
256 tgtggaacta gtatttagta agtgccaaga tacatttctc aaatagtcgt ttggctgtgt 3600
257 ttacattgt tctgtacagg taagggaact tcaactcttt tatacaaagt tctgagactt 3660
258 aaatctacca agctatttag ggtctctttg actcctgggt catcttagag gcttctccct 3720
259 tcacactttt tttttttttt gagacagggt ctccctttgt caccgaagct ggggtgcagt 3780

```

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/770,689A

DATE: 01/04/2002

TIME: 14:44:58

Input Set : A:\Seqlist.txt

Output Set: N:\CRF3\01042002\I770689A.raw